

- Scale cone-shaped, with radiating ridges; antennæ
5-jointed. *Edwallia*, Hempel.
- Scale convex, but not cone-shaped; not divided at all, but rough or
beset with protuberances; antennæ 7 or 8-jointed 7.
7. Natives of the arid region of N. America. . . . *Ceroplastodes*, Ckll. 1893.
Native of India. *Ceroplastodes cajani* (Maskell).*
8. Quite flat, circular, with the glassy covering in two parts, divided longi-
tudinally in the middle line; glassy covering with rows of air-cells
as in *Inglisia*. *Platinglisia*, Ckll., 1899.
- Moderately convex, with the glassy covering in two parts, divided
longitudinally, each part with a low eminence, from which lines
radiate. *Schizochlamidia*, Ckll., ined.
- Very convex, with conical protuberances; glassy covering without
rows of air-cells. *Pseudokermes*, Ckll., 1895.
- (To be continued.)

NEW GENERA AND SPECIES OF NYCTERIBIDÆ AND HIPPOBOSCIDÆ.

BY D. W. COQUILLET, WASHINGTON, D. C.

Pterellipsis, n. gen.—Near Megistopoda, but with aborted wings. Head once and a half as high as long, in profile subhemispherical, covered with bristles which are longest on upper part of the front; eyes oval, situated on sides of head slightly behind the middle, no ocelli; antennæ one-jointed, flattened, elliptical, three-fourths as long as the head, once and a half as long as wide, covered with bristles and bearing a long one at apex. Thorax greatly compressed, strongly gibbous, the sternum flattened, its front end lamelliform and prolonged in front of the anterior coxæ, a longitudinal impressed median line and on each side, slightly behind its middle, is an impressed line extending from it obliquely outward and backward to the lateral margin just behind the middle coxæ; wings narrow, projecting obliquely upward and forward, divaricate, once and one-third as long as height of thorax, four times as long as wide, with three veins besides the costal, each of the median veins forked near the middle, the front fork of the anterior vein reaches the costa near the last fourth of its length, the posterior fork ends in the extreme tip of the wing; the forks of the following vein are united

**Eriochiton cajani*, Maskell, Ind., Mus. Notes, Vol. II., p. 61. I can only leave this in *Ceroplastodes* for the present, but I think the resemblance to that genus is probably due to convergence and not to real affinity.

at their apices, and extended obliquely forward, reaching the wing-margin slightly below the tip; a short distance before this union the anterior branch is connected by a crossvein with the posterior branch of the preceding vein; the other vein extends along the posterior margin of the wing nearly to its middle, then unites with the posterior fork of the preceding vein; veins bearing several stout bristles; halteres distinct; front femora considerably thickened, their tibiae rather slender, middle femora rather robust, once and a third as long as the front ones, their tibiae as thick as and nearly twice as long as the front ones, hind femora and tibiae more slender than and nearly twice as long as the middle ones, each femur bearing several bristles, the tibiae destitute of bristles; first four joints of the front and middle tarsi subequal in length, each slightly broader than long, together slightly longer than the fifth, which is considerably swollen; first joint of the hind tarsi twice as long as wide, as long as the two succeeding joints, the last joint swollen, as long as the three preceding ones; each tarsal claw bears a large lobe at the base of the under side. Abdomen elongate-ellipsoidal, broader and slightly longer than the thorax, bare except at each end and on the venter, where there are a few bristles. Type, the following species:

Pterellipsis aranea, n. sp.—Pale yellow, the abdomen opaque grayish black, knob of halteres white, tarsal claws and the lobe at their base black, bristles brownish yellow. Length 2 mm. Jamaica and Montserrat, W. I. Three specimens taken on bats in caves by the late Mr. H. G. Hubbard. Also 23 specimens collected on bats in Porto Rico by Mr. A. Busck. Type No. 4208, U. S. Nat. Museum.

Trichobius major, n. sp.—Reddish yellow, the abdomen largely grayish black, halteres white, tarsal claws black, the latter lobed at base of the under side; thorax scarcely longer than high; wings whitish yellow, veins yellow, first vein reaching the costa near last sixth of length of wing; abdomen of female bare except a cluster of bristly hairs on each side near the base and at the tip; in the male the hairs in these four clusters are much more numerous. Length 3 to 4.5 mm. Gum Cave, Citrus Co., Florida, and Chiricahua Mts., Ariz. Fifteen males and sixteen females, collected on bats by the late Mr. H. G. Hubbard. Type No. 4209, U. S. Nat. Museum.

Aspidoptera n. gen.—Near *Trichobius*, but the wings reduced to oblong, coriaceous organs appressed to the body and not reaching beyond the first fourth of the length of the abdomen, densely covered with rather long bristles. Head in profile subquadrate, but the upper margin longer than

the lower, vertical diameter only slightly shorter than the longitudinal, covered with stout bristles which are longest on the upper part of the head; eyes narrow, situated near middle of sides of head, no ocelli; antennæ inserted near lower part of the face, projecting obliquely forward and upward, nearly as long as the head, apparently one-jointed, greatly depressed, oval only slightly longer than broad, bristly and with a longer bristle at apex of each. Thorax polished, depressed, about twice as long as high, mesonotum covered with stout bristles, a median sulcus extending from the front end to the transverse sulcus, which is at the last fifth of the mesonotum. Wings inserted on the posterior end of the thorax, less than twice as long as broad; halteres normal. Legs short, femora greatly swollen, less than twice as long as thick, tibiæ flattened, as long as the femora but less than half as wide, first four joints of tarsi subequal in length, much wider than long, together as long as the fifth which is greatly swollen, claws lobed at base of under side. Type, the following species:

Aspidoptera Busckii n. sp.—Reddish yellow, the palpi and legs light yellow, tarsal claws black, halteres white, head with a subtriangular black spot each side of the middle of the upper side, abdomen opaque, tinged with gray, only slightly longer than broad, bristly on each side at the base and at the extreme apex, composed of two segments of which the basal one is less than one-fifth as long as the other. Femora bearing numerous bristles on the upper sides, the tibiæ with a rather long pubescence. Length 2 mm. A female specimen, found on a bat, *Artibeus* sp., in a cave at Bayamon, Porto Rico, Jan. 15, 1899, by Mr. A. Busck, after whom the species is named. Type No. 4210, U. S. Nat. Museum.

In Dr. Williston's recent manual the genus *Ornithomyia* is credited with tridentate tarsal claws, while in *Olfersia* they are said to be bidentate. As a matter of fact, the claws in these two genera are structurally identical, each having two blunt-pointed teeth near the base of the under side. Our Hippoboscid genera with fully developed wings separate as follows:

1. Anal cell closed by crossvein 2.
Anal cell open to the wing-margin, ocelli wanting 4.
2. Humeral angles projecting forward in the form of long tubercles, antennæ greatly depressed, not situated in cavities, projecting at least nearly half the greatest diameter of the eyes in front of the latter . . . 3.
Humeral angles rounded or only slightly projecting, antennæ subovate, situated in cavities, projecting less than one-fourth greatest diameter of eyes in front of the latter (*Ornithomyia confluenta*, Say) *Anthoica?* Rond.

3. Ocelli present, scutellum smooth, bearing a row of bristles in front of the hind margin, the latter bare *Ornithomyia*, Latr.
 Ocelli wanting, hind margin of scutellum roughened with many nearly vertical ridges and fringed with bristles, scutellum otherwise bare. (Type: *Ornithomyia fulvifrons*, Walk.) *Stilbometopa*, n. gen.
4. Anterior angles of thorax projecting forward in the form of long tubercles 5.
 Anterior angles of thorax rounded *Hippobosca*, Linn.
5. Clypeus one-half as long as the middle of the front, scutellum bearing a stout bristle near each lateral margin. *Olfersia*, Wied.
 Clypeus almost as long as the front, scutellum bare. (Type: *P. maculata*, n. sp.) *Pseudolfersia*, n. gen.
Pseudolfersia maculata, n. gen. et sp. Front yellowish brown, the polished lateral margins and vertical triangle dark brown, the latter tapering anteriorly, broadly rounded at the tip, almost reaching the lower end of the front, a black bristle each side of the vertex and a row of smaller yellow ones on each side of the lower two-thirds of the front inside of the polished lateral margins; clypeus brown, yellowish medially, polished, noticeably longer than broad, notched in the middle of the apex and sulcate in the middle, the sulcus terminating in a deep fovea near the base of the clypeus; antennæ brown, subovate but flattened above, lying in deep grooves, not reaching apex of the clypeus, polished except the inner portion of its upper side which is opaque gray pruinose, bearing toward its apex a few yellow hairs and many long black bristles; palpi brown projecting slightly more than their greatest width beyond the apex of the clypeus; under side of the head brown, a yellow median longitudinal sulcus, and a rather large white lobe at its anterior end. Thorax dark brown, polished, the humeral tubercles apically yellow, a spot at inner side of each, another a short distance back of it, a stripe reaching from the prothoracic stigmata to base of wing, the transverse suture and a pair of spots on the posterior end of the thorax opaque gray pruinose, no median longitudinal sulcus, the transverse sulcus interrupted in the middle; pleura thinly gray pruinose except three spots along the suture in front of wings, sternum polished except its extreme anterior end which is gray pruinose; scutellum polished brown, truncate posteriorly, bare except a short pubescence along the posterior margin. Abdomen opaque grayish brown, the apex and venter yellow. Wings smoky brown, apex of auxiliary vein slightly beyond apex of second basal cell, that of first vein slightly beyond apex of first basal cell, of the second vein nearly midway between the apices of the first and third veins; first two sections of fourth vein subequal in length. Legs polished brown, front coxæ anteriorly opaque gray pruinose, pulvilli yellow, basal tooth of each tarsal claw yellowish. Length 7 to 8 mm. Wisconsin, on a Loon; also without indication of locality, on an Osprey, *Pandion haliactus carolinensis*. April 30, 1883. Nine specimens. Type No. 4211, U. S. Nat. Museum.